AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): An active tube, ~~wherein it comprises~~ comprising;

a working channel tube [[the]] inside of which is used as a working channel;

an SMA coil arranged along said working channel tube;

one or more circular weights attached on [[the]] an outer surface of ~~the combined~~ said working channel tube and said SMA coil; and

an outer skin tube covering [[the]] said outer surface of said weight including said working channel tube and said SMA coil.

2. (Currently amended): An active tube, ~~wherein it comprises~~ comprising a tip; and

a main tube connected to said tip, and

said tip [[is]] comprises:

a working channel tube connected through to said main tube;

a bending mechanism to support said working channel tube and to bend said working channel tube;

one or more circular weights attached on [[the]] an outer surface of said bending mechanism; and

an outer skin tube covering [[the]] said outer surface of said bending mechanism together with said weight, and

wherein said bending mechanism includes an SMA coil arranged in [[the]] a longitudinal direction of said working channel tube.

3. (Currently amended): The active tube as set forth in Claim 2, wherein, on [[the]] a front end side of said main tube, a cylindrical thin film inflatably covers ~~inflatable the~~ an outer surface of said main tube, and

said main tube is provided with a balloon inflating channel along [[the]] an axis of said main tube to supply gas or liquid into [[the]] a space between said main tube and said thin film, thereby said thin film is inflated to form a balloon.

4. (Original): The active tube as set forth in Claim 2, wherein an endoscope is inserted into said working channel tube of said tip.

5. (Original): The active tube as set forth in Claim 2, wherein said endoscope is built in said tip.

6. (Cancelled)

7. (Currently amended): The active tube as set forth in any one of Claims [[4 – 6]] 4 and 5, wherein [[the]] a front end of said endoscope is provided with an image input part comprising:

an optical fiber or an image pickup device, and a light guide for illumination or LED to illuminate [[the]] forward of said image input part.

8. (Currently amended): The active tube as set forth in Claim 2 ~~or Claim 6~~, wherein;

said bending mechanism is provided with a pair of links attached at an interval to said working channel tube; [[and]]

an outer skin contacted to said pair of links and covering said working channel tube; and

an air layer is formed with said pair of links and [[the]] an outer surface of said working channel tube~~, and~~

~~said SMA coil is inserted through each small diameter hole of said pair of links to be wired to said air layer~~.

9. (Currently amended): The active tube as set forth in Claim 8, wherein: said links have small diameter holes, and

said SMA coil is inserted through a first small diameter hole of a behind link and a first small diameter hole of a front link, bent back at [[the]] a front end of said front link, inserted through a second small diameter hole of said front link and a second small diameter hole of said behind link, and is wired.

10. (Cancelled)

11. (Currently amended): The active tube as set forth in Claim 8, wherein a plurality of said SMA coils are provided at equal intervals with respect to [[the]] a central axis of said working channel tube between said pair of links.

12. (Currently amended): The active tube as set forth in Claim 2 ~~or Claim 6~~, wherein; said main tube is provided along [[the]] an axis of said main tube with a working channel connected through to said working channel tube and a wiring channel to insert [[the]] an wire to be connected to [[the]] said SMA coil of said bending mechanism.

13. (Currently amended): An active tube system, ~~wherein it comprises~~ comprising:

active tube,

a control box to control a bending mechanism of said active tube, and

a control input part to input [[the]] control information for said bending mechanism to said control box; and

said active tube comprises a tip and a main tube connected to said tip; and wherein

[[the]] said tip of said active tube is provided with;

a working channel tube connected through to said main tube;

a bending mechanism to support said working channel tube and bend said working channel tube;

one or more circular weights attached to [[the]] an outer surface of said bending mechanism; and

an outer skin tube covering [[the]] said outer surface of said bending mechanism together with said weight; and

wherein said bending mechanism includes an SMA coil arranged in [[the]] a longitudinal direction of said working channel tube.

14. (Currently amended): The active tube system as set forth in Claim 13, wherein, on [[the]] a front end side of said main tube, a cylindrical thin film inflatably covers ~~inflatable the~~ an outer surface of said main tube; and

said main tube is provided with a balloon inflating channel along [[the]] an axis of said main tube to supply gas or liquid into [[the]] a space between said main tube and said thin film, thereby said thin film is inflated to form a balloon.

15. (Original): The active tube system as set forth in Claim 13, wherein an endoscope is inserted into said working channel tube of said tip.

16. (Original): The active tube system as set forth in Claim 13, wherein said endoscope is built in said tip.

17. (Cancelled)

18. (Currently amended): The active tube system as set forth in any one of Claims ~~15—17~~ 15 and 16, wherein [[the]] a front end of said endoscope is provided with an image input part comprising;

an optical fiber or an image pickup device, and

a light guide or LED for illumination to illuminate [[the]] forward of said image input part.

19. (Currently amended): The active tube system as set forth in Claim 13 ~~or Claim 17~~, wherein;

said bending mechanism is provided with a pair of links attached at an interval to said working channel tube; [[and]]

an outer skin contacted to said pair of links and covering said working channel tube; and

an air layer is formed with said pair of links and [[the]] an outer surface of said working channel tube~~; and~~

~~said SMA coil is inserted through each small diameter hole of said pair of links to be wired to said air layer~~.

20. (Currently amended): The active tube system as set forth in Claim 19, wherein: said links have small diameter holes, and

said SMA coil is inserted through a first small diameter hole of a behind link and a first small diameter hole of a front link, bent back at [[the]] a front end of said front link, inserted

through a second small diameter hole of said front link and a second small diameter hole of said behind link, and is wired.

21. (Cancelled)

22. (Currently amended): The active tube system as set forth in Claim 19, wherein a plurality of said SMA coils are provided at equal intervals with respect to [[the]] a central axis of said working channel tube between said pair of links.

23. (Currently amended): The active tube system as set forth in Claim 13 ~~or Claim 17~~, wherein;

said main tube is provided along [[the]] an axis of said main tube with;

a working channel connected through to said working channel tube; and

a wiring channel to insert [[the]] a wire to be connected to [[the]] said SMA coil of said bending mechanism.

24. (Currently amended): The active tube system as set forth in Claim 13 ~~or Claim 17~~, wherein; said control input part has a control stick with a formed grip and said control stick is provided with a slide type operational mechanism which can be grabbed with a palm.